

**REMARKS****I.     Status of the Application**

Claims 1-23 are pending in this application. In the April 3, 2007 office action, the

Examiner:

- A.     Allowed claims 19-23;
- B.     Rejected claims 1-18 under 35 U.S.C. § 101 as being directed to non-statutory subject matter; and
- C.     Objected to the Abstract because of a typographical error.

The allowance of claims 19-23 is gratefully acknowledged. In this response, applicant has amended the abstract by deleting the citation of Figure 6 as required. Furthermore, applicant respectfully traverses the examiner's rejection of claims 1-18 under 35 U.S.C. § 101.

**II.    The Rejection of Claims 1-18 Under 35 U.S.C. § 101 Should Be Withdrawn**

In the April 3, 2007 Office Action, the examiner rejected claims 1-18 under 35 U.S.C. § 101 allegedly being directed to non-statutory subject matter. In particular, the examiner alleged that claim 1 is directed to a judicial exception under 35 U.S.C. § 101 (i.e., claim 1 fell within a statutory category, but claimed either a law of nature, natural phenomena or abstract idea).

The examiner bears the initial burden of presenting a prima facie case of unpatentability under 35 U.S.C. § 101. MPEP § 2106. In order to make a prima facie case under 35 U.S.C. § 101, the examiner must explain in the record the reasons why a claim is for

an abstract idea with no practical application. *Id.* In order to show no practical application, the examiner must prove that a claimed invention does not (A) “transform” an article or physical object to a different state or thing; or (B) otherwise produces a useful, concrete and tangible result. MPEP § 2106. A result is “tangible” under 35 U.S.C. § 101 when the result is not abstract. *Id.* A result is abstract when it is “theoretical” or is “not applied or practical”. AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE: FOURTH EDITION 2000.

On page 2 of the April 3, 2007 Office action, the examiner admitted that claim 1 provides a “useful” and “concrete” result. However, the examiner stated that “there does not appear to be a tangible result claimed”. The examiner then argued that claim 1 does not produce a tangible result since the “outcome” of the claim limitations “has not been used in a disclosed practical application nor made available in such a manner that its usefulness in a disclosed practical application can be realized” (pages 2-3 of the April 3, 2007 Office action). The examiner then concludes that the subject matter of the claim is not patent eligible.

It is respectfully submitted that the examiner has not made a prima facie case of unpatentability under 35 U.S.C. § 101 in the April 3, 2007 Office action. In particular, the examiner has merely provided a conclusory statement that no “practical application” can be realized from claim 1. However, claim 1 is clearly directed to a method of using a “mixer” having “a predetermined signal/noise ratio”, and even includes the step of “writing multiplier coefficients in a memory of the mixer.” Mixers are well known, such as in the field of signal processing. The steps of “performing”, “selecting” and “writing” as set forth in claim 1 each provide practical results. For example, the step of “selecting” involves selecting a multiplier group based on the signal/noise ratio of the mixer. As another example, the step of “writing”

involves writing multiplier coefficients to a memory of the mixer. It is respectfully submitted that these results set forth in claim 1 are not merely “abstract” or “theoretical”, but are entirely practical and tangible. Should the examiner maintain the rejection under 35 U.S.C. § 101, he should clearly explain in the record why these limitations of claim 1 are for an abstract idea with no practical application, per the requirements of MPEP § 2106. In particular, why would one skilled in the art of signal processing “selecting a multiplier group ... in dependence on a predetermined signal/noise ration of a mixer” and “writing multiplier coefficients into a memory of the mixer” to be abstract or theoretical and not a practical application in the claimed process?

In view of the foregoing, it is respectfully submitted that the examiner’s rejection of claim 1 under 35 U.S.C. § 101 is improper. Accordingly, the examiner’s rejection of claims 1-18 under 35 U.S.C. § 101 should be withdrawn.

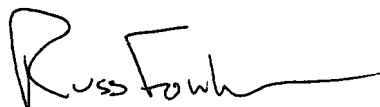
### III. Conclusion

For all of the foregoing reasons, it is respectfully submitted the applicant has made a patentable contribution to the art. Favorable reconsideration and allowance of this application is therefore respectfully requested.

In the event applicant has inadvertently overlooked the need for an extension of time or payment of an additional fee, the applicant conditionally petitions therefore, and authorizes any fee deficiency to be charged to deposit account 13-0014.

July 3, 2007

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Russ Fowler", with a long horizontal flourish extending to the right.

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